UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,537	11/15/2001	Paul E. Bender	PA990480D1	5631

23696 7590 03/07/2006		EXAMINER
QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121		AHMED, SALMAN

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/002,537	BENDER, PAUL E.
	Examiner	Art Unit
	Salman Ahmed	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>12/27/05 (Amendments)</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>15 November 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments see pages 6-8 of the Remarks section, filed 12/27/2005,

with respect to the rejection of claims 1-5 have been fully considered. Amendment to

the claims 1-3 and addition of new claims 6-18 necessitated the new ground(s) of

rejection presented in this Office action (See below).

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

3.   Claims 1, 6, 7, 14, 15 and16 are rejected under 35 U.S.C. 102(e) as being

anticipated by Leung (US PAT 6195705).

        In regards to claims 1, 14 Leung anticipates a method/means for providing

mobility within a network (figure 2a) comprising the steps of: transferring an anchor

point (figure 2a, element 8, router/Home Agent HA1) comprising setting up another

anchor point (figure 2a, element 21, router/Home Agent HA2) and transmitting an OSPF

link state advertisement at predetermined intervals (column 13 lines 14-21 and lines 39-

41, to negotiate with one another for the statuses of active and standby Mobility Agents, the Mobility Agents send hello messages. Hello messages notify other routers/Mobility Agents in the network that a particular router is operational in the system. The format of such hello message is generally similar to that of the hello messages used in protocols such as OSPF. Both active and standby Mobility Agents issue periodic hello messages to let the other routers/Mobility Agents on the network know their statuses).

In regards to claims 6 and 15 Leung anticipates deactivating resources associated with anchor point and initializing another anchor point (column 20, lines 59-67, if the active Mobility Agent decides on its own to relinquish it role as active Mobility Agent, it will also issue a resign message. Regardless, of the circumstances under which the resign message is issued, a router/Mobility Agent in the listen state receiving such message starts its active and standby timers and transitions to the speak state. A router in the speak state starts its active timer. Finally, a Mobility Agent in the standby state clears its active timer and transitions to the active state).

In regards to claims 7 and 16 Leung teaches changing intervals at which link advertisements are transmitted (column 15 lines 54-56, when an active Mobility Agent stops sending hello messages, the standby Mobility Agent will take over after the hold time expires).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 2, 3, 8, 9, 10, 11, 12, 13, 17 and 18 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Leung in view of Moy (OSPF Version 2, Request for

Comments: 1583, March 1994).

In regards to claim 3 Leung teaches a remote terminal apparatus (figure 2a,

element 8, router/Home Agent HA1) for providing mobility within a network (figure 2a)

comprising: a component (figure 3, master central processing unit (CPU) 362) adapted

to transfer an anchor point (figure 2a, element 8, router/Home Agent HA1) that sets up

another anchor point (figure 2a, element 21, router/Home Agent HA2) and transmits

advertisements at predetermined intervals (column 13 lines 14-21 and lines 39-41, to

negotiate with one another for the statuses of active and standby Mobility Agents, the

Mobility Agents send hello messages. Hello messages notify other routers/Mobility

Agents in the network that a particular router is operational in the system. The format of

such hello message is generally similar to that of the hello messages used in protocols

such as OSPF. Both active and standby Mobility Agents issue periodic hello messages

to let the other routers/Mobility Agents on the network know their statuses); wherein

advertisements indicate that packets having a destination IP address equal to that of the

IP address of said remote terminal should be delivered to said remote terminal (column

11 lines 16-17, a home address specifying the IP address of the Mobile Node). In

regards to claims 8, 9, 12, 13, 17 and 18 Leung teaches sending an ARP message

informing entities that all packets with a destination address of said anchor point may be

sent to an address of another anchor point (column 23 lines 1-10, if the active Home

Agent receives a packet from a corresponding node or Foreign Agent and decides that

the optimal route is through the standby Home Agent, the active Home Agent could,

under normal circumstances, send redirect instructions (an ICMP redirect packet) to the

corresponding node. This would tell the corresponding node to use the standby Home

Agent, and the node would then issue an ARP request for the standby Home Agent's

primary address. Thereafter the corresponding node would route packets through the

standby Home Agent and would use the real standby Home Agent MAC address (as

opposed to the group virtual MAC address)). In regards to claims 9, 10, 11, 13 and 18

Leung teaches deactivating resources associated with anchor point; initializing said

another access point (column 20, lines 59-67, if the active Mobility Agent decides on its

own to relinquish it role as active Mobility Agent, it will also issue a resign message.

Regardless, of the circumstances under which the resign message is issued, a

router/Mobility Agent in the listen state receiving such message starts its active and

standby timers and transitions to the speak state. A router in the speak state starts its

active timer. Finally, a Mobility Agent in the standby state clears its active timer and

transitions to the active state); changing intervals at which link advertisements are

transmitted (column 15 lines 54-56, when an active Mobility Agent stops sending hello messages, the standby Mobility Agent will take over after the hold time expires),

In regards to claim 2 Leung does not explicitly teach the advertisement contains a low cost associated with the routing of packets having a destination IP address of remote system. In regards to claims 2 and 3 Leung does not explicitly teach the age field of advertisements are lower than a maximum age. In regards to claims 8, 9, 12, 13, 17 and 18 Leung does not explicitly teach setting a first timer representing the maximum amount of time it should take for a low cost route to propagate throughout a network.

In regards to claim 2 Moy in the same field of endeavor teaches the advertisement contains a low (Page 18 section 3.5 – the cost of the route is the minimum cost to any of the networks falling in the specified range) cost (Section 9 page 35, Interface output cost(s): The cost of sending a data packet on the interface, expressed in the link state metric) associated with the routing of packets having a destination IP address of remote system (Section 9 page 35, IP interface address: The IP address associated with the interface. This appears as the IP source address in all routing protocol packets originated over this interface). In regards to claims 2 and 3 Moy in the same field of endeavor teaches a link advertisement contains an age field ("LS age field" -- page 60 section 12.1.1 LS age) that is set to a value lower than the maximum age page 60 section 12.1.1 LS age: the age of a link state advertisement is never incremented past MaxAge). In regards to claims 8, 9, 12, 13, 17 and 18 Moy in the same field of endeavor teaches setting a first timer representing the maximum amount of time it should take for a low cost route to propagate throughout a network (page 71 section 12.4.2, paragraph

four, a router that has formerly been the Designated Router for a network, but is no longer, should flush the network links advertisement that it had previously originated. This advertisement is no longer used in the routing table calculation. It is flushed by prematurely incrementing the advertisement's age to MaxAge).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leung's apparatus by incorporating age related fields in advertisement packets as taught by Moy. The motivation is that Moy recommends it in the rfc 1583.

6.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung in view of Moy in view of Saleh et al. (US PAT 6801496), hereinafter referred to as Saleh.

In regards to claim 4 Leung in view of Moy, teach link state advertisement being send at regular interval as described in the rejections of claim 3 above.

In regards to claim 4 Leung in view of Moy does not explicitly teach a user interface that allows the intervals at which link advertisements are transmitted to be changed.

In regards to claim 4 Saleh in the same field of endeavor teaches (column 8 lines 26-27) the interval between Hello transmissions is a configurable parameter that can be different for each link.

It would have been obvious to one having ordinary skill in the art at the time the invention was -made to modify Leung in view of Moy's apparatus by incorporating interval timing parameter to be configurable as taught by Saleh. The motivation is that (as suggested by Saleh, column 8 lines 27-30) nodes are expected to use the HelloInterval parameters specified in their neighbor's Hello message. As such, it is to be configurable to make the network more robust.

In regards to claim 5, Leung in view of Moy teaches advertisements are OSPF link state advertisements (column 13 lines 14-21 and lines 39-41, to negotiate with one another for the statuses of active and standby Mobility Agents, the Mobility Agents send hello messages. Hello messages notify other routers/Mobility Agents in the network that a particular router is operational in the system. The format of such hello message is generally similar to that of the hello messages used in protocols such as OSPF).

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Salman Ahmed whose telephone number is (571)272-

8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2666

SA

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600